



12 **EUROPEAN PATENT APPLICATION**

21 Application number : **94304014.7**

51 Int. Cl.<sup>5</sup> : **G10L 3/00, G10L 5/06, A01M 31/00**

22 Date of filing : **03.06.94**

30 Priority : **15.06.93 US 76751**

43 Date of publication of application :  
**21.12.94 Bulletin 94/51**

84 Designated Contracting States :  
**AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE**

88 Date of deferred publication of search report :  
**22.03.95 Bulletin 95/12**

71 Applicant : **ONTARIO HYDRO**  
**700 University Avenue**  
**Toronto, Ontario M5G 1X6 (CA)**

72 Inventor : **Patrick, Paul H.**  
**6345 Bell School Line**  
**Milton, Ontario L9T 2Y1 (CA)**  
Inventor : **Ramani, Narayan**  
**879 Lovington Crescent**  
**Mississauga, Ontario L4W 3S6 (CA)**  
Inventor : **Hanson, William G.**  
**52 Shaver Avenue South**  
**Islington, Ontario M9B 3T4 (CA)**  
Inventor : **Sheehan, Ronald W.**  
**R.R. No.1, Acton**  
**Ontario L7J 2L7 (CA)**  
Inventor : **Jennette, Robert L.**  
**3931 Whitemarsch Lane**  
**Edgewater, MD. 21037 (US)**

74 Representative : **Sommerville, John Henry**  
**SOMMERVILLE & RUSHTON**  
**11 Holywell Hill**  
**St. Albans Hertfordshire, AL1 1EZ (GB)**

54 **Automated intelligent monitoring system.**

57 The invention relates to an automated system for monitoring wildlife auditory data and recording same for subsequent analysis and identification. The system comprises one or more microphones (8) coupled to a recording apparatus (10) for recording wildlife vocalizations in digital format. The resultant recorded data is preprocessed, segmented, and analyzed by means of a neural network to identify the respective species. The system minimizes the need for human intervention and subjective interpretation of the recorded sounds.

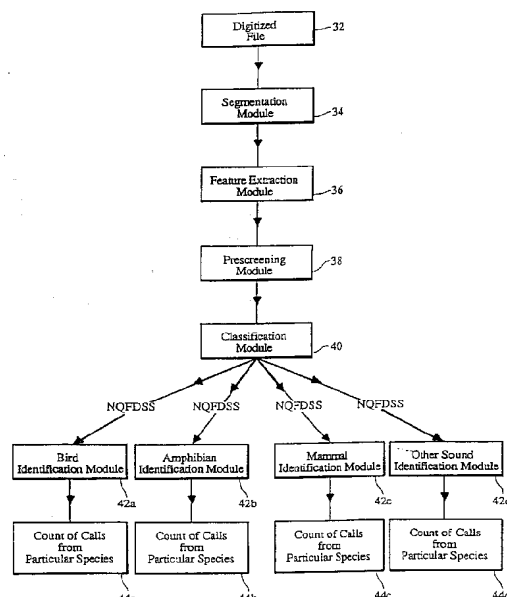


FIGURE 3



European Patent  
Office

## EUROPEAN SEARCH REPORT

Application Number  
EP 94 30 4014

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.5)
E	CA-A-2 089 597 (BAIN) * page 1 - page 2 *	1	G10L3/00 G10L5/06 A01M31/00
X	--- SIGNAL PROCESSING V. THEORIES AND APPLICATIONS. PROCEEDINGS OF THE FIFTH EUROPEAN SIGNAL PROCESSING CONFERENCE, EUSIPCO 90, vol.3, 1990, BARCELONA, ES pages 1643 - 1646 TROUILHET ET AL. 'Spectral signature recognition with a view to counting acoustic events' * paragraph 1-2 *	1	
X	--- US-A-4 965 552 (PRICE ET AL.) * column 1 - column 2, line 35 *	1,2,5	
A	--- US-A-4 895 025 (BETTS) * column 1, line 12 - column 2, line 38 *	1,2,5	
A	--- INTERNATIONAL CONFERENCE ON ACOUSTICS, SPEECH AND SIGNAL PROCESSING 92, vol.2, 23 March 1992, SAN FRANCISCO, CA, US pages 189 - 192 SIU ET AL. 'An unsupervised, sequential learning algorithm for the segmentation of speech waveforms with multiple speakers' * paragraph 2 4 *	16	TECHNICAL FIELDS SEARCHED (Int.Cl.5) G10L A01M
A	--- INTERNATIONAL CONFERENCE ON ACOUSTICS, SPEECH AND SIGNAL PROCESSING 92, vol.2, 23 March 1992, SAN FRANCISCO, CA, US pages 169 - 172 CHANG 'Augmented phonetic map for voice verification' * paragraph 4.4 *	18-20	
		---	-/--
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 25 January 1995	Examiner Lange, J
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons * : member of the same patent family, corresponding document	

EPO FORM 1503 03/92 (P4/C01)



European Patent  
Office

# EUROPEAN SEARCH REPORT

Application Number  
EP 94 30 4014

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.5)
A	IEEE INTERNATIONAL JOINT CONFERENCE ON NEURAL NETWORKS 91, vol.3, 18 November 1991, SINGAPORE pages 2752 - 2756 SUN ET AL. 'Some key factors in speaker recognition using neural network approach' * page 2753 - page 2755 * -----	18-22	
			TECHNICAL FIELDS SEARCHED (Int.Cl.5)
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 25 January 1995	Examiner Lange, J
<p><b>CATEGORY OF CITED DOCUMENTS</b></p> <p>X : particularly relevant if taken alone  Y : particularly relevant if combined with another document of the same category  A : technological background  O : non-written disclosure  P : intermediate document</p> <p>T : theory or principle underlying the invention  E : earlier patent document, but published on, or after the filing date  D : document cited in the application  L : document cited for other reasons  .....  &amp; : member of the same patent family, corresponding document</p>			

EPO FORM 1503 01.92 (P04C01)